Notebook

English

EasyGuide

AMILO L7320

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Are there ...

... any technical problems or other questions that you need help with?

Please contact:

- Our Hotline/Help Desk (Internet address: *www.fujitsu-siemens.com/support/helpdesk.html*)
- your sales partner
- Your sales office

Additional information is contained in the Help Desk list and the "Warranty" manual.

You can find the "Warranty" manual on your notebook under *Start –* *Manuals* or on the CD/DVD "Drivers & Utilities".

The latest information on our products, tips, updates, etc., can be found on the internet under: *www.fujitsu-siemens.com*

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This manual was produced by
Xerox Global Services

Published by
Fujitsu Siemens Computers GmbH
Printed in the Federal Republic of Germany
AG 06/06
Edition **1**

Order No.: **10600727428**
Order No.: **440 N30790**

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AMILO L7320

Operating Manual

Introduction

Technical data

Ports and operating elements

Manufacturer's notes

Important notes

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Using your notebook for the first time

Using your notebook

Security functions

Connecting external devices

Removing and installing components

Settings in BIOS Setup Utility

Troubleshooting and tips

June 2006 edition

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Innovative technology...

... and ergonomic design make your AMILO a user-friendly and reliable notebook.
Your notebook is available in several different versions. Most of the sections in this manual apply to all models – any differences are pointed out separately. Some of the illustrations and features in this manual may differ from your model and are for guidance only.
Your operating system (e.g. Microsoft Windows XP) has already been preinstalled and optimally configured so that you can be up and running from the moment you switch on your AMILO for the first time.
Your notebook features the very latest technology so that you get the best performance from your computing experience. Depending on which model you own, you have access to:

- Up to 2 GB of main memory (RAM) Information about approved memory modules is available from our Technical Support.
- A combined CDRW / DVD dual drive or a multi-format DVD drive with double-layer support for playing DVD films or writing CDs/DVDs
- Several USB connections for easy expansion with webcams, game pads, printers and more
- An internal modem, LAN and optional wireless LAN for Internet access
- An integrated audio controller and a mono loudspeaker You can even connect a microphone and external speakers for even better performance.

With the user-friendly *BIOS Setup Utility* you can control the hardware of your notebook and protect your system better against unauthorised access by using the powerful password properties.
This operating manual tells you how to put your AMILO into operation, and how to operate it in daily use.

You can also find information on your AMILO in the following locations:

- in the manuals "Safety" and "Warranty"
- in the wireless LAN software documentation (PDF file on your notebook), on the "Driver & Utilities" CD/DVD or on our website)
- in your operating system documentation
- in the information files (e.g. **.TXT*, **.DOC*, **.CHM*, **.HLP*, **.PDF*, **.HTML*)

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Notational conventions

The following symbols are used in this manual:

Indicates information which is important for your health or for preventing physical damage. Failure to follow the instructions may lead to loss of data, invalidate your warranty, destroy the notebook, or endanger your life.

Indicates important information which is required to use the system properly.

► Texts which follow this symbol describe activities that must be performed in the order shown.

`This font` indicates screen outputs.

This font indicates programme names, commands, or menu items.

"Quotation marks" indicate names of chapters, hard disks, CDs, DVDs, and terms that are being emphasised.

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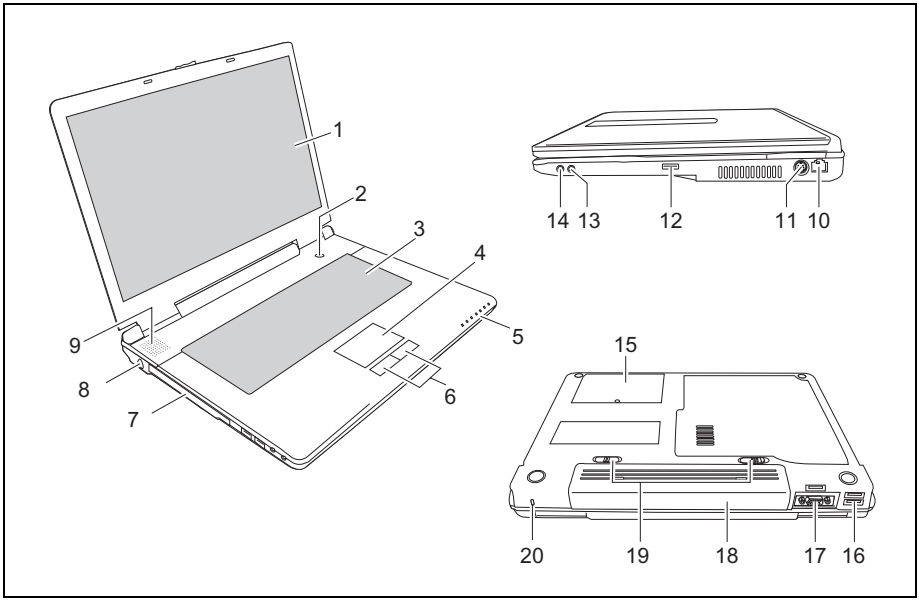
Ports and operating elements

This chapter presents the individual hardware components of your notebook. You can obtain an overview of the displays and connections of the notebook. Please familiarise yourself with these components before you start to work with your notebook.



1 = LCD screen
2 = ON/OFF switch of the notebook
3 = Keyboard
4 = Touchpad
5 = Status indicators
6 = Touchpad buttons
7 = CD/DVD drive
8 = Modem: port
9 = Built-in loudspeakers
10 = LAN port
11 = DC IN jack
12 = USB port
13 = Headphones connection / Line Out
14 = Microphone connection / Line In
15 = Hard disk
16 = USB ports
17 = Monitor port
18 = Battery
19 = Battery release latch
20 = Kensington Lock

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Important notes

Here you will find essential safety information regarding your notebook. The other notes provide useful information on your notebook.

- Keep this operating manual together with your notebook.
  If you pass on the notebook to a third party, you should also pass on the operating manual.

Safety notes

Pay attention to the information provided in the "Safety" manual and in the following safety notes.

- When connecting and disconnecting cables, observe the relevant notes in this operating manual.
- Read the information on the ambient conditions in the chapter "Technical data" and the chapter "Using your notebook for the first time" before putting your notebook into operation and switching it on for the first time.
- When cleaning the device, please observe the relevant notes in the "Cleaning the notebook" paragraph.
- If you have a notebook with wireless LAN, you must also observe the additional safety precautions for devices with wireless components in the "Safety" manual.
- Please refer to the notes in the "Removing and installing components during servicing" chapter.

This notebook complies with the relevant safety regulations for data processing equipment. If you have questions about using your notebook in a particular area, please contact your sales outlet or our Hotline/Help Desk.

Energy saving

If you will not be using your notebook, switch it off.

Make use of the device's energy saving functions (see "Using the power-management features"). If you use the possible energy saving functions, the notebook uses less energy. You will then be able to work for longer before having to recharge the battery.

Energy saving under Windows

If a monitor with energy saving features is connected to your notebook, you can use the *Screen Saver* tab to activate the energy saving features of the monitor. Select a screen saver via *Start – Control Panel – Appearance and Themes – Display – Screen Saver*.
You can select further energy saving functions in the menu *Start – Control Panel – Performance and Maintenance – Power Options*.

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Battery storage

If you do not use the batteries for long periods, remove them from the notebook. Never store the batteries in the unit.

Store the battery when it is half full or two-thirds full. The battery should be stored in a dry area at a temperature between 0°C and +30°C. The lower the temperature at which the batteries are stored, the lower is the rate of self-discharge.

Travelling with your notebook

Please follow these guidelines when travelling with your notebook.

- Back up important data stored on your hard disk.
- Switch off the radio component (Wireless LAN) for data security reasons. With data traffic via a wireless connection, it is also possible for unauthorised third parties to receive data.

Information on activating data encryption is provided in the documentation for your radio component.

- If you wish to use your notebook during a flight, first check with the flight attendants if it is OK to do so.

When travelling in other countries

- If you are travelling abroad, check that the mains adapter can be operated with the local mains voltage. If this is not the case, obtain the appropriate mains adapter for your notebook.
  Do not use any other voltage converter!
- Check whether the local power supply and the specifications of the power cable are compatible. If this is not the case, buy a power cable that matches the local conditions. Do not use a connection adapter for electrical devices to connect the notebook.
- Enquire with the corresponding government office of the country you will be travelling in as to whether you may operate the radio component integrated in your notebook there (also see "CE marking").
- If you use a modem, compatibility with the local telecommunications system may be a problem. This may result in poor performance, or the modem will not work at all.
  You may require a country-specific telephone adapter (available as an accessory).

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Transporting the notebook

- Remove all disks (e.g. CD, DVD) from the drives.
- Switch the notebook off.
- Unplug the mains adapter and all external devices from the power socket.
- Disconnect the mains adapter cable and the data cables for all external devices.
- Close the LCD screen so that it locks into place.
- To protect against damaging jolts and bumps, use a notebook carrying case to transport your notebook.
- Protect the notebook from severe shocks and extreme temperatures (e.g. direct sunlight in a car).

Cleaning the notebook

► Switch the notebook off.

► Unplug the mains adapter from the mains socket.

► Remove the battery.

Do not clean any interior parts yourself; leave this job to a service technician.

Only use cleaning products designed for computers. Normal household cleaners and polishes can damage the markings on the keyboard and the device, the paintwork or the notebook itself.

Ensure that no liquid enters the notebook.

The Crystal View display is very sensitive to scratching! Only clean the display surface with a very soft, slightly damp cloth.

Wipe the casing with a dry cloth.
If particularly dirty, use a cloth which has been moistened in mild domestic detergent and then carefully wrung out.

To clean the keyboard and the touchpad, you can use disinfectant wipes.

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Using your notebook for the first time

Please read the "Important notes" chapter.

Before you can use your notebook for the first time you need to charge the battery and install the supplied software. The Windows operating system and drivers required are already pre-installed.

On delivery, the rechargeable battery is in the accessories packaging. The battery must be charged if you want to operate your notebook with the battery.

When not plugged into a mains outlet, the notebook runs on its built-in battery. You can increase the battery's life by enabling the system's energy saving functions.

When you use your notebook in your home or office, we recommend you use the mains adapter instead of the battery.

Please see the "Connecting external devices" chapter for instructions on how to connect devices such as a mouse and a printer to the notebook.

Unpacking and checking your notebook

- ► Unpack all the individual parts.
- ► Check your notebook for damage incurred during transportation.

Should you discover damages incurred during transportation, notify your local sales outlet immediately!

We recommend that you keep the original packaging material. You may need the packaging in the future if you need to transport your device.

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Selecting a location

Select a suitable location for the notebook before setting it up. Consider the following points when looking for a location:

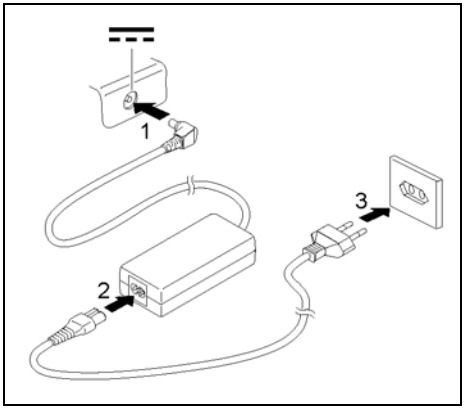
- Never place the notebook on a soft surface (e.g. carpeting, upholstered furniture, bed). This can block the air vents and cause overheating and damage.
- Do not place the notebook on your legs for a longer period of time. The underside of the notebook heats up during normal operation. Longer contact with the skin can become unpleasant or even result in burns.
- Place the notebook on a stable, flat, non-slippery surface. Please note that the rubber feet may mark certain types of surfaces.
- Keep other objects 100 mm away from the notebook and its mains adapter to ensure adequate ventilation.
- Never cover the fan intake or exhaust openings of the notebook or the mains adapter.
- Do not expose the notebook to extreme environmental conditions.
  Protect the notebook from dust, humidity, and heat.

Connecting the power adapter

Please take note of the information in the section "Safety notes".

The power cable supplied conforms to the requirements of the country in which you purchased your notebook. Make sure that the power cable is approved for use in the country in which you intend to use it.

The mains adapter's AC cable should only be connected to a mains socket if the notebook is connected to the mains adapter.



► Connect the mains adapter cable (1) to the DC jack (DC IN) of the notebook.

► Connect the power cable (2) into the mains adapter.

► Plug the power cable (3) into a mains outlet.

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Switching on the notebook for the first time

When you switch on your notebook for the first time, the supplied software is installed and configured. Due to the fact that this installation must not be interrupted, you should set aside enough time for it to be fully completed and connect the notebook to the mains outlet using the mains adapter.

During installation, the notebook may only be rebooted when you are requested to do so!

In order to make it easier for you when you are starting up your notebook for the first time, the operating system is already pre-installed on the hard disk and the manuals are saved to the hard disk.

- ► Switch the notebook on (see "Using your notebook" chapter, "Switching on the notebook" section).
- ► During installation, follow the instructions on screen.

Consult the operating system manual if there is anything unclear about the requested input data.

If a Windows operating system is installed on your notebook, you can find further information about the system as well as drivers, utilities, updates, manuals etc. either on your Notebook, on the "Drivers & Utilities" CD/DVD or on our Internet pages.

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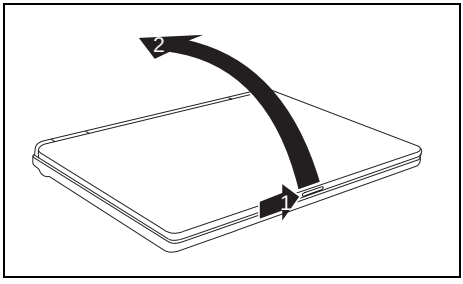
Using your notebook

This chapter describes the basics for operating your notebook.
Please see the "Connecting external devices" chapter for instructions on how to connect devices such as a mouse and a printer to the notebook.

Please refer to the notes in the "Important notes" chapter.

Switching on the notebook



► Slide the release button in the direction of the arrow (1) and unfold the LCD screen upward (2).

► Press the ON/OFF switch (1) to switch the notebook on.

The power-on indicator (⏻) on the notebook lights up.

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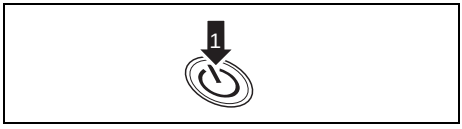
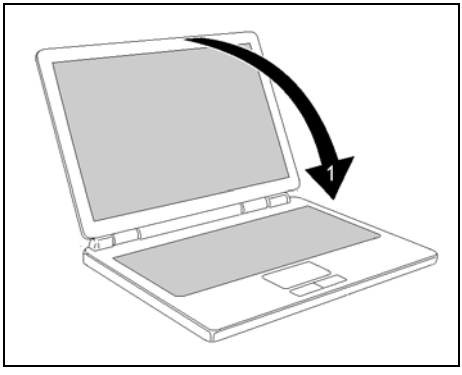
Switching off the notebook

► Shut down the operating system properly (e. g. Windows XP by clicking *Start* then *Turn off Computer*).



► If the notebook is not switched off automatically, press the ON/OFF switch (1) for approx. five seconds.



► Close the LCD screen (1) so that it locks into place.

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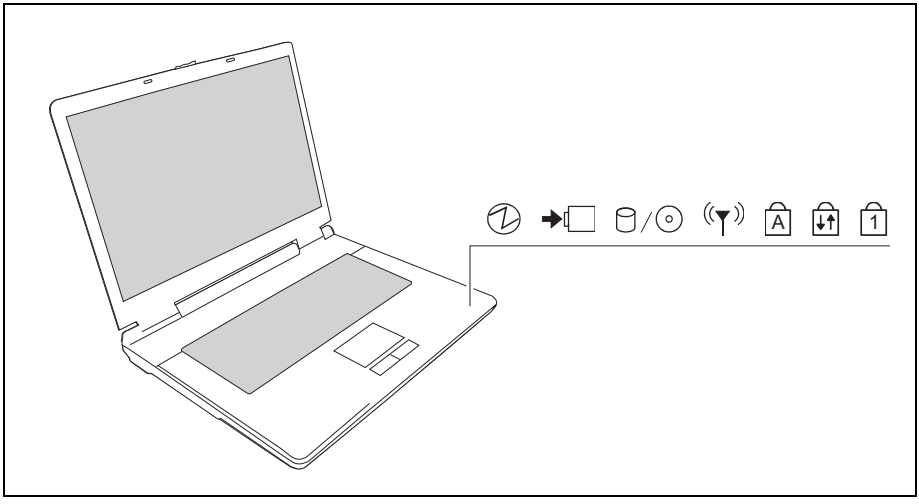
Status indicators

The status indicators provide information about the status of the power supply, the drives and the keyboard functions. These indicators are also visible with the notebook closed.



Power-on indicator	Caps Lock indicator
Battery charging indicator	Scroll indicator (Scroll Lock)
Indicator: hard disk drive indicator	Num Lock indicator
Indicator Wireless LAN	

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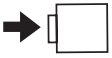
Power-on indicator

- The indicator lights up: The notebook is switched on.
- The indicator is dark: The notebook is switched off.



Battery/Charging Indicator

The charging state of the battery is shown with the battery indicator.

- The indicator lights up: The battery will charge.
- The indicator is dark: The battery is not being charged or it is already full.

Indicator: hard disk drive indicator

- The indicator lights up: One of the drives (e.g. hard disk, CD/DVD) is being accessed.

Wireless LAN indicator

- The indicator lights up: The wireless LAN module is switched on.
- The indicator is dark: The wireless LAN module is switched off.

Caps Lock indicator

- The indicator lights up: The Caps Lock key has been pressed.

  All the characters you type appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.

Scroll indicator (Scroll Lock)

- The indicator lights up: The key combination **Fn** + **Scroll** has been pressed.

  The effect this key has varies from programme to programme.

Num Lock indicator

- The indicator lights up: The **Num** key has been pressed.

  The numbers on the upper right on keys in the integrated numeric keypad are enabled.

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Keyboard

The keyboard of your notebook is subject to continuous wear due to normal use. The keyboard markings are subjected to particularly high loads. The keyboard markings can wear off in the course of using the notebook.

The keyboard has been designed to provide all the functions of an enhanced keyboard. Some enhanced keyboard functions are mapped with key combinations.

The following description of keys refers to Windows. Additional functions supported by the keys are described in the relevant manuals supplied with your application programmes.

The figure below shows how to access the different characters on keys with overlaid functions. The example applies when the Caps Lock indicator is not lit.

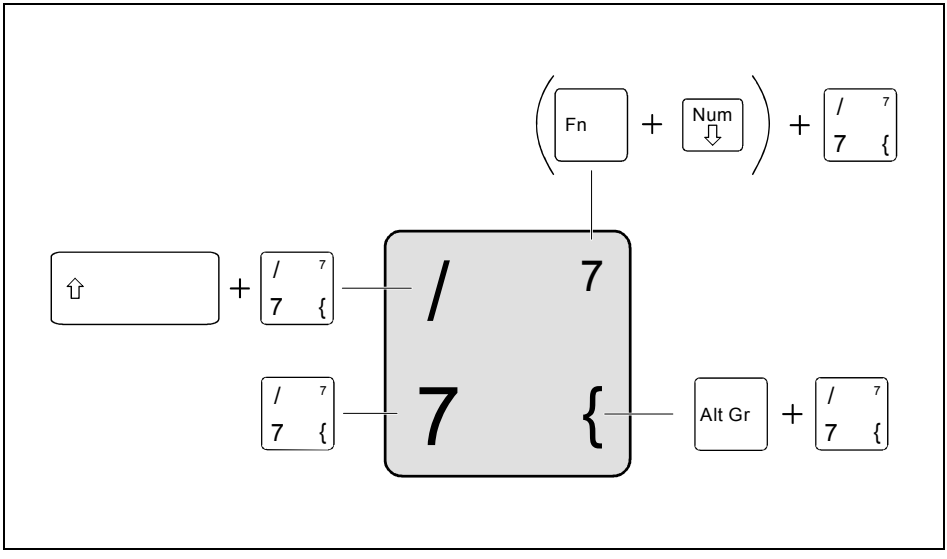

Illustration (example of German keyboard layout)

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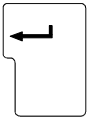
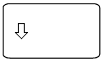
Backspace key
The Backspace key deletes the character to the left of the cursor.

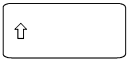
Key: Tab key
The Tab key moves the cursor to the next tab stop.



Enter key (return)
The enter key terminates a command line. The command you have entered is executed when you press this key.

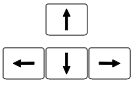


Caps Lock key
The Caps Lock key activates uppercase mode (CapsLK indicator lit). The Caps Lock function causes all the characters you type to appear in uppercase. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.
To cancel the Caps Lock function, simply press the Caps Lock key again.



Shift key
The Shift key causes uppercase characters to appear. In the case of overlay keys, the character printed on the upper left of the key appears when that key is pressed.

Fn key
The **Fn** key enables the special functions indicated on overlay keys (see "Key combination").
If the external keyboard does not feature a **Fn** key, you can simultaneously press the **Ctrl** + **Alt** keys instead.



Cursor keys
The cursor keys move the cursor in the direction of the arrow, i.e. up, down, left, or right.

Pause key
The **Pause** key temporarily suspends display output. Output will resume when you press any other key.

Start key
The Start key invokes the Windows Start menu.

Menu key
The Menu key invokes the menu for the selected item.

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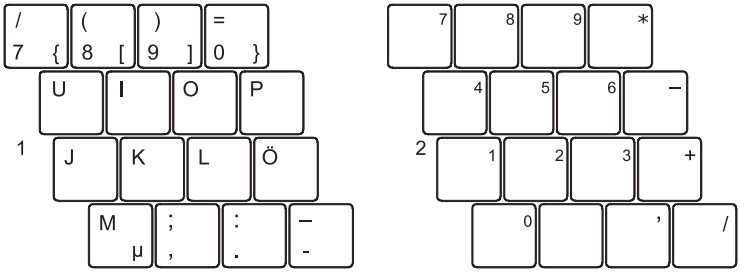
Virtual numeric keypad

The keyboard of your notebook does not have a separate number block. To provide the convenience of a numeric keypad, your keyboard is equipped with a virtual numeric keypad. The special keys of the virtual numeric keypad are recognisable by the numbers and symbols printed in the upper right corner of each key. If you have switched on the virtual numeric keypad, you can output the characters shown on the upper right of the keys.



1 = Characters enabled when Num Lock indicator is not lit (see "Status indicators" section).
2 = Characters enabled when Num Lock indicator is lit (see "Status indicators" section).

Key combination

The following description of key combinations refers to functions when using Microsoft Windows. Some of the following key combinations may not function in other operating systems and with some device drivers.

Other key combinations are described in the relevant manuals supplied with your application programmes.

Key combinations are performed as follows:

► Press and hold the first key in the combination.

► While holding the first key down, press the other key or keys in the combination.

If the external keyboard does not feature a **Fn** key, you can simultaneously press the **Ctrl** + **Alt** keys instead.

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Fn + F2

Switching wireless LAN on/off

With this key combination you can switch the wireless LAN on or off. The Wireless LAN indicator lights up when wireless LAN is activated.

Fn + F3

Switching the loudspeakers on/off

This key combination switches your notebook's loudspeaker off and on.

Fn + F4

Switching between Display output

If an external monitor is connected, the monitor on which the output is to be displayed can be selected with this key combination.

You can opt to use:

- just the notebook's LCD screen (LCD)
- just the external monitor (CRT)
- both the LCD screen and the external monitor (LCD&CRT)

Fn + F5

Increasing the volume

This key combination raises the volume of the integrated loudspeakers.

Fn + F6

Reducing the volume

This key combination reduces the volume of the integrated loudspeakers.

Fn + F7

Increasing screen brightness

This key combination increases screen brightness.

Fn + F8

Decreasing screen brightness

This key combination decreases screen brightness.

Alt + ⭾

Switch between open applications

With this key combination you can switch between several open applications.

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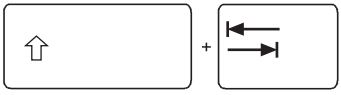
Carrying out a warm boot

This key combination triggers a reset and warm-boots the notebook.

- ► First hold down the **Ctrl** and **Alt** key and then press the **Del** key. The Task Manager is displayed.
- ► Select *Turn off computer*... and then *Restart* and click on *OK* to confirm. The system then performs a warm boot.



Backtab

This key combination moves the cursor back to the previous tabular stop.

Key combinations with the Windows keys are contained in the manual for your operating system.

Country and keyboard settings

If you want to change the country and keyboard settings, proceed as follows:

- ► Click on *Start – Control Panel*.
- ► Double-click on *Regional and Language Options*.

The current settings are displayed in the *Regional Options* tab.

- ► Select the country settings you want to use.
- ► Click on *Apply*.
- ► Click on the *Details…* button in the *Languages* tab.
- ► Click on *Add*... to add other keyboard layouts to the selection.
- ► In the *Default input language* field, choose the keyboard layout you want to use when you start your notebook.
- ► Click on *Apply* and confirm with *OK*.

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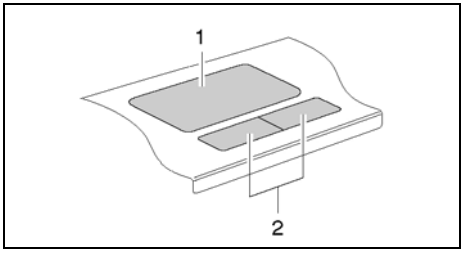
Touchpad and touchpad buttons



The touchpad enables you to move the mouse pointer on the screen. The touchpad buttons allow the selection and execution of commands. They correspond to the buttons on a conventional mouse.

1 = Touchpad
2 = Touchpad buttons

Moving the pointer

► Move your finger on the touchpad.

The pointer will move accordingly.

Selecting an item

► Move the pointer to the item you wish to select.

► Tap the touchpad once or press the left button once.

The item will be selected.

Executing a command

► Move the pointer to the field you wish to select.

► Tap the touchpad twice or press the left button twice.

The command will be executed.

Dragging an object

► Select the desired object.

► Press and hold the left button and drag the object to the desired position with the finger on the touchpad.

The item will be moved.

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LCD screen

Information on the LCD screen

High-quality TFT displays are installed in notebooks from Fujitsu Siemens Computers GmbH. For technical reasons, TFT monitors are manufactured for a specific resolution. An optimal, clear picture can only be ensured in the resolution intended for the particular TFT monitor. A monitor resolution which differs from the specification can result in an unclear picture.

The monitor resolution is understood to be the number of horizontal and vertical pixels (i.e. picture elements) which make up the monitor display. For example, "WUXGA" stands for 1920 x 1200 pixels. Each pixel consists of three so-called subpixels of the colours red, green and blue. As a result, a WUXGA monitor consists of 1920 x 1200 x 3 = 6,912,000 subpixels.

Frequently used monitor resolutions	Number of pixels
XGA	1024 x 768
WXGA	1280 x 800
SXGA	1280 x 1024
SXGA+	1400 x 1050
WXGA+	1440 x 900
UXGA	1600 x 1200
WSXGA	1680 x 1050
WUXGA	1920 x 1200

The screen resolution of the LCD monitor of your notebook is optimally set at the factory.

Permanently unlit or lit pixels

The standard of production techniques today cannot guarantee an absolutely fault-free screen display. A few isolated constant lit or unlit pixels may be present. The maximum permitted number of pixels faults is stipulated in the stringent international standard ISO 13406-2 (Class II).

Example:

A 15" LCD screen monitor with a resolution of 1024 x 768 has 1024 x 768 = 786432 pixels. Each pixel consists of three subpixels (red, green and blue), so there are almost 2,4 million subpixels in total. According to ISO 13406-2 (Class II), a maximum of 4 pixels and 5 subpixels may be defective, i.e. a total of 17 faulted subpixels. That is approx. 0.0007 % of the entire subpixel!

Background lighting

TFT screens are operated with background lighting. The luminosity of the background lighting can decrease during the period of use of the notebook. However, you can set the brightness of your monitor individually.

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Monitor settings

Setting the desktop area

The screen resolution of the LCD monitor of your notebook is optimally set at the factory.

Changing the font size

Under *Start – Control Panel – Appearance and Themes – Display – Settings* you can choose between a larger and a smaller font in the *Font size* field.

Synchronising the display on the LCD screen and an external monitor

Your notebook supports the simultaneous display on the LCD screen and an external monitor. Pressing the key combination **Fn** + **F4** switches between LCD only, external monitor and LCD or external monitor only. The last setting is useful if you would like high resolution and refresh rate on an external monitor.

Battery

The battery is one of the most important components of your notebook. When not plugged into a mains outlet, the notebook runs on its built-in battery. You can increase the life of the battery by caring for the battery properly. The average battery life is around 500 charge/discharge cycles. You can extend the battery life by taking advantage of the available energy saving functions.

Charging, caring for and maintaining the battery

The notebook battery can only be charged when the ambient temperature is between 5 °C and 35 °C.

You can charge the battery by connecting the notebook to the mains adapter (see "Power adapter: connecting").

You can maintain long life from your battery by allowing it to discharge fully before you recharge it again. To do this, leave your notebook turned on when it is operated with the battery. Once the battery is running low you will hear a warning alarm. If you do not connect the mains adapter within five minutes of the warning alarm described above, your notebook will automatically switch off.

Information on the battery charging time is contained in the "Technical data" chapter.

Monitoring the battery charging level

Windows also has a "Battery status meter" in the taskbar for monitoring the battery capacity. When you place the mouse pointer on the battery symbol, the system displays the battery status.

Storing the battery

Keep the battery pack between 0°C and +30°C (32 and 122 degrees Fahrenheit). The lower the temperature at which the batteries are stored, the lower is the rate of self-discharge.

If you store rechargeable batteries for a longer period (longer than two months), the battery charge level should be approx. 30%. To prevent deep discharge, check the charging level of the battery at regular intervals. To be able to make use of the optimal charging capacity of the batteries, the battery should be completely discharged and then fully recharged.

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If you do not use the batteries for long periods, remove them from the notebook. Never store the batteries in the unit.

Removing and installing the battery

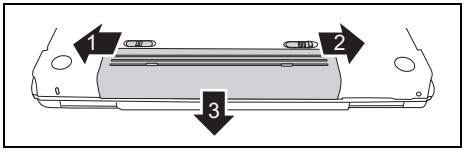
Only use batteries approved by Fujitsu Siemens Computers for your notebook.

Never use force when inserting or removing a battery.

Make sure that no foreign bodies get into the battery connections.

Removing battery

- ► Switch the notebook off and pull the power plug out of the mains socket.
- ► Close the LCD screen so that it locks into place.
- ► Disconnect all cables connected to the notebook.
- ► Turn your notebook over and place it on a sturdy, flat surface.

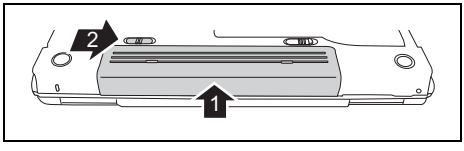


- ► Push the battery lock in direction of the arrow (1).
- ► Slide the release button in the direction of the arrow (2) and hold it in place.

The arrows are indicated on the buttons.

- ► Remove the battery from the battery compartment (3).

Inserting the battery



- ► Push the battery into the battery compartment until it engages (1).
- ► Push the battery lock in direction of the arrow (2).

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Using the power-management features

If you use the possible energy saving functions, the notebook uses less energy. You will then be able to work longer when using the battery before having to recharge it.

You can also use energy saving modes such as *Standby* or *Hibernate* for times when you are not using your notebook but want to keep coming back to it.

If you are connecting to a network, or the Internet, we advise you to turn off the energy saving modes as they interrupt your connection.
When you are finished working with your notebook we advise you to come out of an energy saving mode and then turn off as normal.
Never turn off your notebook while it is in an energy saving mode.
If the notebook is in an energy-saving mode:

- Do not connect any external devices.
- Do not disconnect any external devices.
- Do not attempt to switch the notebook on if the built-in battery is flat.
- Do not add or remove RAM.

When you close the lid, the notebook automatically enters an energy-saving mode.
The energy saving functions can be activated under *Start – Control Panel – Performance and Maintenance – Power Options*. Under Windows, *Hibernate* is activated by default.

Hard disk

The hard disk is the most important storage medium of your notebook. You can work considerably faster and more efficiently if you copy applications and files from CDs/DVDs to your hard disk.

When the hard disk is accessed, the drive indicator lights up .

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CD/DVD data storage formats and CD/DVD drive (device-specific)

DC/DVD data storage formats

Your notebook is delivered with an CD/DVD drive. Depending on the variant, your notebook is equipped with a combined CDR W/DVD drive or a multi format DVD drive with double layer support. CD/DVD drives can either only read or both read and write different CDs or DVDs. The meaning of the respective CD and DVD types is described in the following:

CD-ROM

Abbreviation for **C**ompact **D**isc – **R**ead **O**nly **M**emory. A CD-ROM is an optical data storage device that can contain a maximum of 700 MB. These data cannot be changed.

CD-R

Abbreviation for **C**ompact **D**isc **R**ecordable. A CD-R is an optical data storage device that can only be written with a maximum of 700 MB of data. Then these data cannot be changed, but can be read as often as desired.

CD-RW

Abbreviation for **C**ompact **D**isc **R**e**W**riteable. A CD-RW is an optical data storage device that can be written with a maximum of 700 MB of data a virtually unlimited number of times. This means the data can be deleted and changed.

DVD (DVD-ROM and DVD video)

Abbreviation for **D**igital **V**ersatile **D**isc or **D**igital **V**ideo **D**isc. A DVD is an optical data storage medium that can contain a maximum of 17 GB of data. These data cannot be changed.

DVD+R/DVD-R

Abbreviation for **D**igital **V**ersatile **D**isc **R**ecordable or **D**igital **V**ideo **D**isc **R**ecordable. A DVD+R or a DVD-R is an optical data storage device that can only be written once with a maximum of 4.7 GB of data. Then these data cannot be changed, but can be read as often as desired.

DVD+R and DVD-R are different standards. DVD+Rs and DVD-Rs can only be written by drives which support the respective standard.

DVD+RW/DVD-RW

Abbreviation for **D**igital **V**ersatile **D**isc or **D**igital **V**ideo **D**isc **R**e**W**riteable. A DVD+RW or a DVD-RW is an optical data storage device that can be written with a maximum of 4.7 GB of data virtually an unlimited number of times. This means the data can be deleted and changed.

DVD+RW and DVD-RW are different standards. DVD+RWs and DVD-RWs can only be written by drives which support the respective standard.

DVD+R DL / DVD-R DL (Double Layer)

Abbreviation for **D**igital **V**ersatile **D**isc **R**ecordable **D**ouble **L**ayer or **D**igital **V**ideo **D**isc **R**ecordable **D**ouble **L**ayer. A DVD+R DL or a DVD-R DL is an optical data storage device that can only be written once with a maximum of 8.5 GB of data. Then these data cannot be changed, but can be read as often as desired.

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DVD-R LF (with Label Flash Support)

Abbreviation for **V**ersatile **D**isc **R**ecordable **L**abel **F**lash. A DVD-R LF is an optical data storage device that can only be written with a maximum of 4.7 GB of data. Then these data cannot be changed, but can be read as often as desired. The data storage device is suitable for direct labelling with Label Flash.

CD/DVD drives (device-specific)

Combined CDRW / DVD drive

You can read all CD/DVD types specified above with the combined CDRW / DVD drive. You can also write CD-Rs and CD-RWs.

Please ask your local computer store for assistance if you are not sure which CD or DVD type suits best for your needs, e. g. backing up data, recording films, storing pictures etc..

Multi-format DVD burner with double layer support

With the Multi-format DVD burner with double layer support you can read all optical data storage media named above. You can also write CD-Rs, CD-RWs, DVD+Rs, DVD+RWs, DVD-Rs, DVD-RWs and DVD+R DLs.

Please ask your local computer store for assistance if you are not sure which CD or DVD type suits best for your needs, e. g. backing up data, recording films, storing pictures etc..

Handling CD/DVDs

Observe the following guidelines when handling CD/DVDs:

- Avoid touching the surface of a CD/DVD. Hold CDs/DVDs by their edges!
- Always store CDs/DVDs in their cases. This will protect CD/DVD from dust, scratches and other damage.
- Protect your CDs/DVDs from dust, mechanical vibration and direct sunlight!
- Avoid storing a CD/DVD in areas subject to high temperatures or humidity.

In order to make use of the full recording speed of your drive, please use disks marked "Multispeed" or "High Speed"

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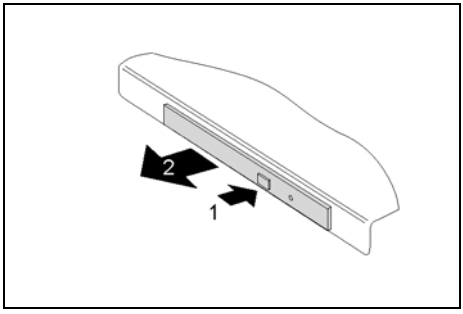
Inserting or removing a CD/DVD

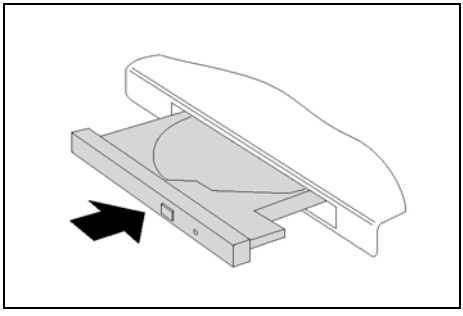


The notebook must be switched on.

► Push the insert/eject button (1).

The drive tray will open.

► Gently pull the drive tray (2) completely out.



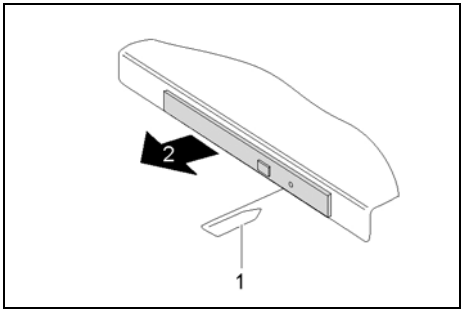
► Place the CD/DVD in the drive tray with the label facing upwards.

or

► Take out an inserted CD/DVD.

► Push in the drive tray until you feel it lock into place.

Manual removal (emergency removal)



In the event of a power failure or damage to the drive it may be necessary to manually remove the CD/DVD.

► Switch the notebook off.

► Press a pen or a piece of wire (e.g. a paperclip) firmly into the opening (1).

The drive tray is ejected. You can now pull the drive tray (2) out of the drive.

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Regional codes for DVD films and DVD players

DVD films and DVD players (e.g. the DVD drive of your notebook) are always provided with a regional code. The regional codes of DVD films and DVD players must match so that the DVD film can be played back.

There are six different regional codes:

- Region code 1: USA and Canada
- Region code 2: Egypt, Europe, Japan, South Africa and the Middle East
- Region code 3: South East Asia (incl. Hong Kong, Indonesia, the Philippines, South Korea, Taiwan)
- Region code 4: Australia, New Zealand, South-East Pacific, Central and South America, and the Caribbean
- Region code 5: Africa (except South Africa), India and the former Soviet states
- Region code 6: China

The DVD drive of your notebook supports the function RPC-II (Phase II System of Regional Playback Control). This function permits the final user to change the regional code of the drive up to five times to play back corresponding DVD films. Then the last regional code selected is retained and cannot be changed again.

If a DVD film is to be watched in all regions, it has the regional code 0.

Before buying a DVD film you should check that the region code of the DVD film matches the region code set for the DVD drive of your notebook.

Adjusting AutoPlay function of your CD/DVD drive

Windows XP Home uses AutoPlay technology. This allows you to tell Windows XP Home how to use different types of CD or DVD disks.

You can set the AutoPlay function of the CD/DVD drive according to your needs. For example, if you insert a music CD you can tell Windows XP to open Media Player and start to play it.

Proceed as follows:

► Click *Start* and then *My Computer*.

The *My Computer* window will appear.

► Select the CD / DVD icon you want to change and click it with the right-hand mouse or touchpad button.

A context menu appears.

► Click on *Properties*.

► Click on the *AutoPlay* tab.

► Adjust the AutoPlay function to meet your needs.

Please note that you must select the desired action and confirm it with *Apply* for each individual CD/DVD content type.

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Loudspeaker

One loudspeaker is fitted to your notebook.

i If you attach headphones or external loudspeakers, the built-in loudspeaker is disabled.

Volume adjustment

► Set the desired volume with the key combination Fn + F5 or Fn + F6.

or

► use the Windows volume control under *Start – Programs – Accessories – Multimedia – Volume Control* to adjust the volume.

Integrated 56k modem

The integrated 56k modem supports all data communication applications, such as:

- Modem operation: High-speed downloads at up to 56,000 bit/s (V.9x). Downward-compatible to V.34 modems.
- Fax operation: Transmitting and receiving at up to 14,400 bit/s
- Simple country adaptation with programme

The modem complies with the EU Directive 91/263/EEC (Telecommunications terminal equipment directive) and has been checked in agreement with the guideline TBR-21.

The modem can be operated in the following countries:

Multifrequency (MFC) dialling
Belgium, Denmark, Germany, Finland, France, Greece, Great Britain, Holland, Ireland, Iceland, Italy, Luxembourg, Norway, Austria, Portugal, Sweden, Switzerland and Spain.

Pulse dialling:
Belgium, France, Holland and Italy.

Also in: Polen, Slowenien, Südafrika und Ungarn.

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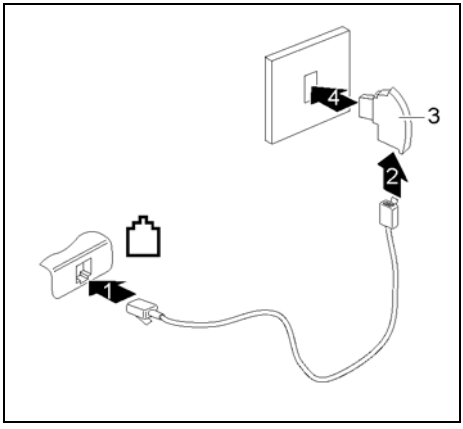
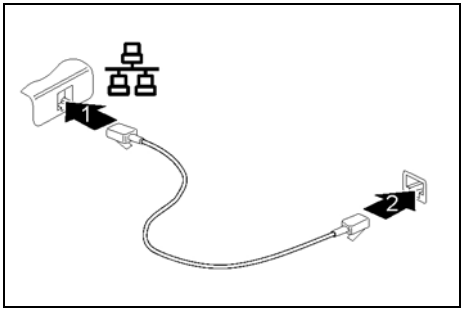
Connecting notebook modem to telephone wall socket



- ► Connect the modem cable to the modem port of the notebook (1).
- ► Connect the modem cable (2) to the specific telephone adapter for your country (3).
- ► Connect the modem cable to your telephone wall socket (4).

i Please note that the telephone line is busy and that you cannot use your telephone if the modem cable is plugged into the telephone wall socket. Pull the modem cable out of the telephone socket after you have finished your internet session or the fax mode and reconnect the telephone cable.

Ethernet and LAN



The internal LAN module of your notebook supports Ethernet-LAN (10/100 Mbps). With the LAN module you can establish a connection to a local network (LAN = Local Area Network).

- ► Connect the LAN cable to the LAN port of the notebook (1).
- ► Connect the LAN cable to your network connector (2).

i Your network administrator can help you to configure and use the LAN-connections.

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Wireless LAN

The installation of a wireless LAN module not approved by Fujitsu Siemens Computers GmbH voids the permits (CE!) issued for this device.

A wireless LAN is integrated in your notebook.

Switching wireless LAN module on and off

Check whether the wireless LAN module is activated/deactivated in the installed wireless LAN software.

► You can switch the wireless LAN module on and off by pressing the key combination Fn + F2.

The wireless LAN indicator lights up when the wireless LAN module is switched on.

Please note the additional safety precautions for devices with wireless LAN in the "Safety" manual.

Detailed information can be found in the online help file and PDF document for your wireless LAN software.

You can find the "Wireless LAN" manual on your notebook, on the "Drivers & Utilities" CD/DVD or on our website.

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Security functions

Your notebook has several security features that you can use to secure your system from unauthorised access.

This chapter will explain how to use each function, and what the benefits are.

Please remember that in some cases, for example, forgetting your password, you can be locked out and unable to access your data. Please note therefore the following hints:

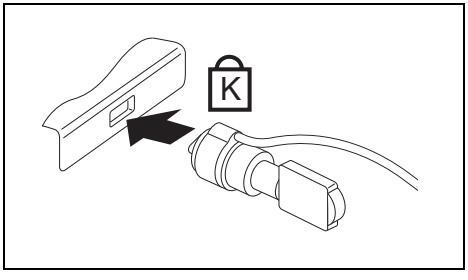
- Make regular backups to external storage devices such as external hard drives, CD or DVD disks.
- Some security functions need you to choose a password. Make a note of the passwords and keep them in a safe place.

If you forget your passwords you will need to contact the help desk. Passwords are not covered by your warranty and a charge will be made for assistance.

Brief overview of the security functions

Security functions	Type of protection	Preparation
Kensington Lock	Mechanically robust steel cable with lock	Mount and lock Kensington MicroSaver (accessory)
BIOS password protection	Password protection for *BIOS Setup Utility* and operating system with supervisor and user password. The password consists of a maximum of eight alphanumeric characters.	Specify at least one supervisor password in the *BIOS Setup Utility* and activate the password protection for the operating system as desired.

Using Kensington Lock



► Fit the Kensington MicroSaver on the device on your notebook.

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Configuring password protection in BIOS Setup Utility

Before using the various options of password protection for your data security in the *BIOS Setup Utility*, please note the following hints:

- Make a note of the passwords and keep them in a safe place. If you forget your supervisor password you will not be able to access your notebook.
  Passwords are not covered by your warranty and a charge will be made for assistance.
- Make regular backups to external storage devices such as external hard drives, CD or DVD disks.

Your password can be up to eight characters long and contain letters and numbers. It does not matter if you use upper or lowercase characters.

Protecting BIOS Setup Utility (supervisor and user password)

If you have opened these operating instructions on the screen, we recommend that you print out the following instructions. Because you cannot call the instructions onto the screen while you are setting up the password.

You prevent unauthorised opening of the *BIOS Setup Utility* with both the supervisor and the user password. With the supervisor password you have access to all functions of the *BIOS Setup Utility*, and with the user password only to part of the functions. You can only set a user password if a supervisor password has already been assigned.

Please refer to section "Settings in BIOS Setup Utility" for a description of entering and operating the *BIOS Setup Utility*.

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Setting supervisor and user password

► Enter the *BIOS Setup Utility* and go to the *Security* menu.

► Mark the *Set Supervisor Password* field and press the Enter key.

With *Enter new Password:* you are asked to enter a password.

► Enter the password and press the Enter key.

With *Confirm new Password* you are asked to confirm the password.

► Enter the password again and press the Enter key.

► Confirm the information message *Changes have been saved*.

The new password has been saved.

► To assign the user password, select the field *Set User Password* and proceed exactly as when configuring the supervisor password.

If you do not want to make any other settings, you can exit *BIOS Setup Utility*.

► Select the item in the menu.

► Select *Yes* and press the Enter key.

The notebook is rebooted and the new password is effective. If you now want to open the *BIOS Setup Utility*, you must first enter your supervisor or user password. Please note that you only have access to a few BIOS settings with the user password.

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Changing supervisor or user password

In order to change the Supervisor password you need to be logged into the *BIOS Setup Utility* using the existing Supervisor password.

- ► Enter the *BIOS Setup Utility* again.
- ► Follow the steps for setting the supervisor password.

Cancelling passwords

To cancel a password (without setting a new password) run the following steps:

- ► Enter the *BIOS Setup Utility* and go to the *Security* menu.
- ► Mark the *Set Supervisor Password* or *Set User Password* field and press the Enter key.
- ► Enter your current password under *Enter Current Password* and press Enter to confirm.
- ► In the fields *Enter new Password* and *Confirm new Password* you just need to press Enter both times..
- ► Select the item in the menu.
- ► Select *Yes* and press the Enter key.

Your notebook will now restart and the password is cancelled.

With the supervisor password you simultaneously deactivate the user password.

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Password protection of operating system

With the supervisor password or the user password, you have assigned in the *BIOS Setup Utility* (see "

Setting supervisor and user password" section), you can also prevent booting of the operating system.

Activating system protection

- ► Enter the *BIOS Setup Utility* and go to the *Security* menu.
- ► Select the *Password on Boot* option and press the Enter key.
- ► Select *Enabled* and press the Enter key.
- ► Select the *Exit Saving Changes* option under *Exit*.

The notebook restarts. You will be prompted to enter your password (the supervisor password).

Deactivating system protection

- ► Enter the *BIOS Setup Utility* and go to the *Security* menu.
- ► Select the *Password on Boot* option and press the Enter key.
- ► Select *Disabled* and press the Enter key.

If you do not want to make any other settings, you can exit *BIOS Setup Utility*.

- ► Select the *Exit Saving Changes* option under *Exit*.

The notebook reboots and there is no longer any password protection for the system.

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Connecting external devices

Before you connect or disconnect any devices from your notebook please read the safety notes in the "Important notes" chapter.

Always read the documentation supplied with the device you wish to connect.

Never connect, or disconnect cables during a thunderstorm.

Never pull on a cable when disconnecting it. Always hold the plug.

Follow the steps below in order, when connecting or disconnecting devices to your notebook:

Connecting devices to notebook

1. Turn off your notebook and all external devices.
2. Unplug your notebook and all devices from the mains sockets.
3. Connect the cables for your external devices following the supplied instructions.
4. Plug all power cables into the mains sockets.

Disconnecting devices from notebook

1. Turn off your notebook and all external devices.
2. Unplug your notebook and all devices from the mains sockets.
3. Disconnect the cables for your external devices following the supplied instructions.

Some of the external devices require special drivers (see the operating system and external device documentation).

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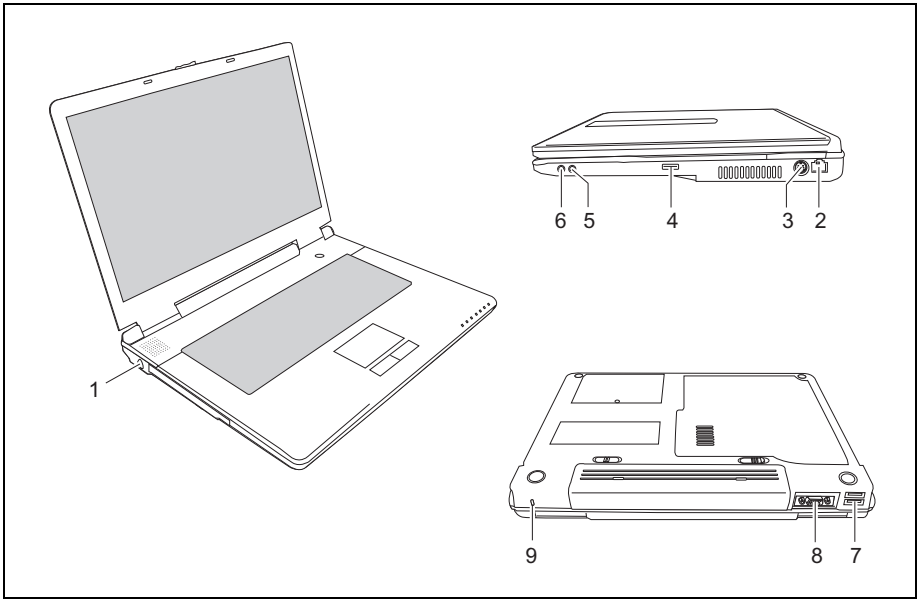
Ports



1 = Modem: port
2 = LAN port
3 = DC IN jack
4 = USB port
5 = Headphones connection / Line Out
6 = Microphone connection / Line In
7 = USB ports
8 = Screen port
9 = Kensington Lock

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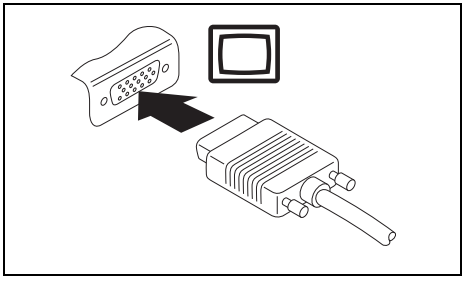
Connecting an external monitor

An external monitor can be connected to the notebook.



- ► Switch off the notebook and the external monitor.
- ► Connect the data cable of the external screen to the notebook's screen port.
- ► First switch on the external screen and then the notebook.

Using the Fn + F4 key combination you can switch back and forth between the external monitor and the notebook's LCD screen.

You can display the same picture on the external monitor and the LCD screen simultaneously.

Setting the refresh rate for your external monitor

The refresh rate must be correctly set so that the image does not flicker.

- ► Select the monitor type in the menu *Start – (Settings) – Control Panel – Appearance and Themes – Display – Settings – Advanced – Display*.
- ► Now select the *Adapter* tab.
- ► Adjust the refresh rate and then click *Apply*.

If the refresh rate set is too high, the monitor may be damaged. Please see the documentation included with your monitor for the maximum possible refresh rate.

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Connecting USB devices

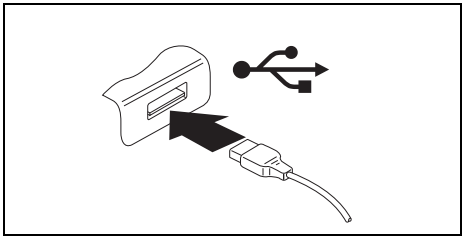
On the USB ports you can connect external devices that also have a USB port (e.g. a printer, a scanner or a modem).

USB devices are hot-pluggable. This means you can connect and disconnect devices while your operating system is running.

USB 1.x has a maximum data transfer rate of 12 Mbit / s.

USB 2.x has a data transfer rate of up to 480 Mbit/s.

Additional information can be found in the documentation for the USB devices.



- ► Connect the data cable to the external device.
- ► Connect the data cable to a USB port of the notebook.

Device drivers

Some USB devices will be automatically recognised and installed by your operating system. However, newer devices will need to be installed using the supplied CD / DVD. Always follow the instructions supplied with the device to complete the installation.

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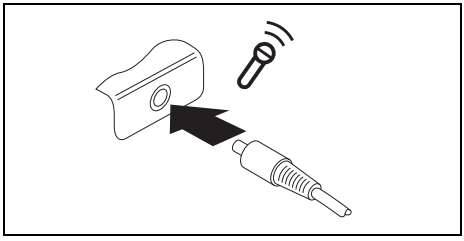
Connecting external audio devices

Microphone connection / Line In

The microphone connection allows you to connect an external microphone, a MiniDisc player, MP3 player, CD player or a tape deck to your notebook.

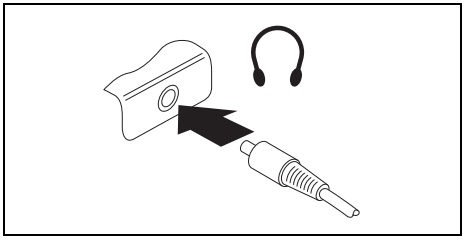


► Connect the data cable to the external device.

► Connect the data cable to the Line In port of the notebook.

Headphones connection / Line Out

You can connect either headphones or external loudspeakers to your notebook via the headphones connection.



► Connect the data cable to the external device.

► Connect the data cable to the Line Out port of the notebook.

Volume adjustment

► Set the desired volume with the key combination Fn + F5 or Fn + F6.

or

► use the Windows volume control under *Start – Programs – Accessories – Multimedia – Volume Control* to adjust the volume.

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Removing and installing components during servicing

Only qualified technicians should repair the device. Unqualified users who open the notebook's case expose themselves to electric shock and fire hazards. It will also invalidate your warranty.

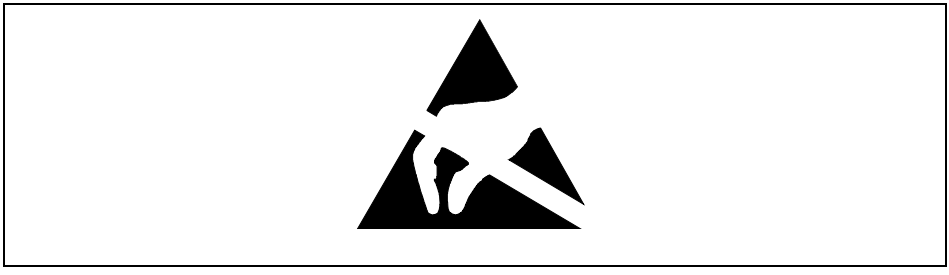
You may remove and install the components described in this chapter yourself after consulting the Hotline/Help Desk.

If you remove and install components without consulting the Hotline/Help Desk, then the warranty of your notebook will be voided.

Notes on installing and removing boards and components

- Switch the notebook off and pull the power plug out of the mains socket.
- Remove the battery.
- Take care when you use the locking mechanisms on the battery and any other component.
- Never use sharp objects such as screwdrivers, scissors or knives as leverage to remove covers.

Boards with electrostatic sensitive devices (ESD) are identifiable by the label shown.



When you handle boards fitted with ESDs, you must, under all circumstances, observe the following points:

- You must statically discharge yourself before working with boards (e.g. by touching a grounded object).
- The equipment and tools you use must be free of static charges.
- Remove the power plug from the mains supply before inserting or removing boards containing ESDs.
- Always hold boards with ESDs by their edges.
- Never touch pins or conductors on boards fitted with ESDs.

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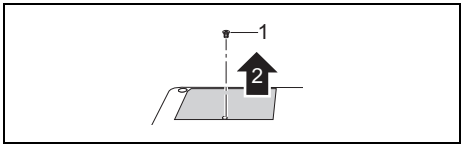
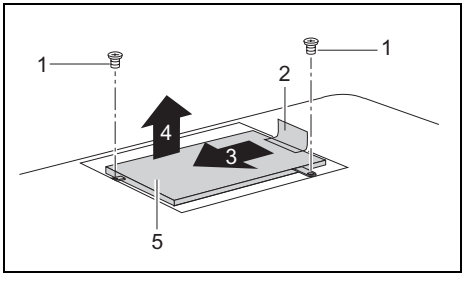
Installing and removing the hard disk

Removing the hard disk

- ► Switch the notebook off and pull the power plug out of the mains socket.
- ► Close the LCD screen so that it locks into place.
- ► Disconnect all cables connected to the notebook.
- ► Turn your notebook over and place it on a stabile, sturdy, flat surface. If necessary, lay an anti-slip cloth on this surface to prevent the notebook from being scratched.
- ► Remove the battery (see "Removing and installing the battery").



- ► Remove the screw (1).
- ► Lift the cover off the notebook in the direction of the arrow (2).



- ► Remove the screws (1) from the frame of the hard disk.
- ► Pull the hard disk by the pulling aid (2) in the direction of the arrow (3).
- ► Working in the direction of the arrow (2), remove the hard disk with the frame (5) out of the hard disk compartment.

- ► Remove the 4 screws from the frame of the hard disk.
- ► Pull the hard disk out of the frame.

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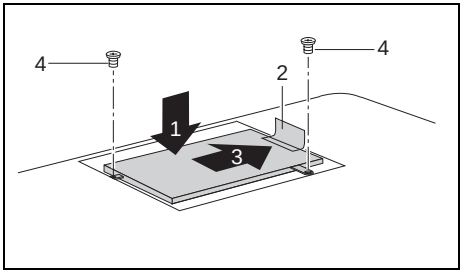
Installing the hard disk

When installing the hard disk, make sure that the contacts in the hard disk compartment do not get bent or damaged. Follow the instructions in the user manual for the hard disk.

► Slide the hard disk into the frame.

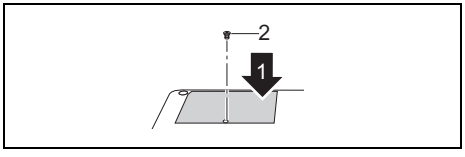
► Secure the hard disk to the frame using the 4 screws.



► Working in the direction of the arrow (1), insert the hard disk with the frame into the hard disk compartment.

► Pull the hard disk by the pulling aid (2) in the direction of the arrow (3) so that the contacts engage. If necessary, use a finger to guide the left-hand edge of the hard disk along.

► Secure the frame with the 2 screws (4).



► Fit the cover in the direction of the arrow (1).

► Fasten the cover with the screw (2).

► Install the battery (see "Removing and installing the battery").

► Turn the notebook over and place it on a flat surface.

► Reconnect the cables that you disconnected before.

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Memory expansion

Your notebook has between 256 MB and 2 GB of main memory installed, depending on the upgrade level. The notebook will not start without memory modules, as no fixed main memory is installed.

Installing and removing the memory extension

If you are asked by the Hotline/Help Desk to remove and install the memory extension yourself, proceed as follows:

Please note the information provided in the "Safety notes" section in the "Important notes" chapter.

The notebook must be switched off when installing/removing memory modules, and must not be in Suspend mode.

Use only memory expansions which have been released for your notebook: 256 MB, 512 MB or 1 GB modules DDR2-400 SO DIMM (PC 3200) or 256 MB, 512 MB or 1 GB modules DDR2-533 SO DIMM (PC 4200).

Never use force when installing or removing memory modules.

Make sure that foreign objects do not fall into the memory extension compartment.

The memory modules are located in a larger service compartment. You must open the entire service compartment when removing and installing a memory module. Once you have removed the cover, the various components are exposed. These components should be removed and replaced only by authorised specialists. Therefore, be sure to observe the following:

Individual components (e.g. the processor heat sink) can become very hot during operation. Therefore, we recommend that you wait one hour after switching off the notebook before removing or installing the memory modules. Otherwise, there is a danger of being burned!

As some components with ESDs are exposed, please observe the section "Notes on installing and removing boards and components" in the chapter "Important notes".

- ► Switch your notebook off.
- ► Close the LCD screen so that it locks into place.
- ► Unplug the mains adapter from the mains socket.
- ► Disconnect all cables connected to the notebook.
- ► Turn your notebook over and place it on a stabile, sturdy, flat surface. If necessary, lay an anti-slip cloth on this surface to prevent the notebook from being scratched.
- ► Remove the battery (see "Removing and installing the battery").

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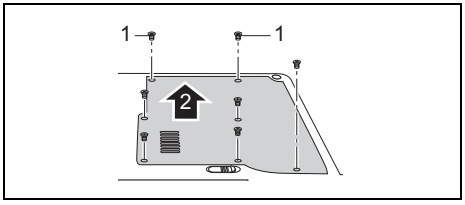
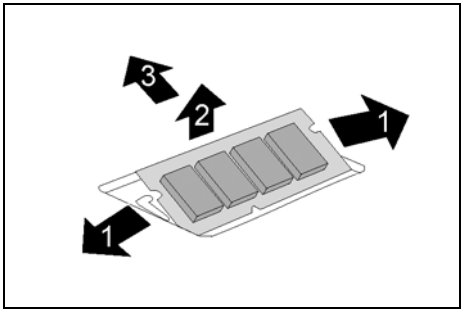
Removing cover



► Remove the 7 screws (1).

► Lift the cover off the notebook in the direction of the arrow (2).

Memory modules: removing

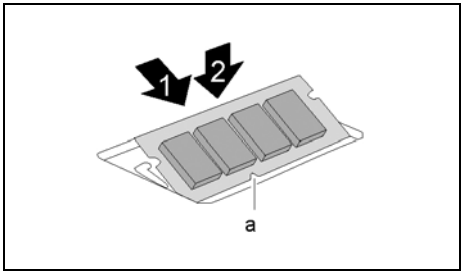


► Carefully push the two mounting clips outwards (1).

The memory module will flap upward (2).

► Pull the memory module out of its slot in the direction of the arrow (3).

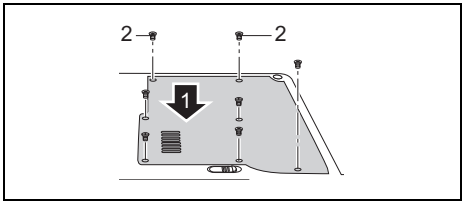
Memory module: installing



► Insert the memory module with the contacts and the recess (a) facing the slot (1).

► Carefully push the memory module downwards until it engages noticeably (2).

Mounting the cover



► Fit the cover in the direction of the arrow (1).

► Secure the cover with the den 7 screws (2).

► Install the battery (see "Removing and installing the battery").

► Turn the notebook over and place it on a flat surface.

► Reconnect the cables that you disconnected before.

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Settings in BIOS Setup Utility

In *BIOS Setup Utility* you can set the system functions and the hardware configuration of the notebook.
When it is delivered, the notebook is set to factory default settings. You can change these settings in *BIOS Setup Utility*. Any changes you make take effect as soon as you save and quit the *BIOS Setup Utility*.

The *BIOS Setup Utility* programme contains the following menus:

Main:	For system settings such as time and date and information about the notebook
Advanced:	For system settings like interface settings
Security:	For security settings such as the password
Boot:	For specifying the start order
Exit:	For saving the changes and terminating the *BIOS Setup Utility*

Start BIOS Setup Utility

► Reboot the notebook (switch off/on or reboot the operating system).

The following or a similar display appears on the screen during booting:

```
F2: Setup   F12: Boot menu
```

► When this message appears, press the function key **F2**.

i If a password has been assigned:

► Enter the password and press the Enter key.

If you have forgotten the password, contact your system administrator or contact our customer service centre.

Operating BIOS Setup Utility

i Press the **F1** key to display help for the *BIOS Setup Utility*.
The description of the individual settings is shown in the right-hand window of the *BIOS Setup Utility*.

► Select the menu in which you want to make settings with the cursor keys.

The menu is displayed on the screen.

► Use the cursor keys to select the option you wish to change.

► Press the Enter key.

► Change the option with the cursor keys ↑ or ↓.

► Press the Enter key to confirm your selection.

► Press the **Esc** key to exit the selected menu.

► For future reference, make a note of the changes you have made (for example, in this manual).

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Exiting BIOS Setup Utility

To exit *BIOS Setup Utility*, select the *Exit* menu from the menu bar. You can then decide which settings you want to save. The *Exit* menu offers the following options.

► Mark the desired option with the cursor keys ↑ or ↓.

► Press the Enter key to confirm your selection.

Exit Saving Changes – save settings and exit BIOS Setup Utility

► Select *YES* to save the current settings in the menus and exit the *BIOS Setup Utility*.

The device is rebooted and the new settings come into effect.

Exit Discarding Changes – Reject changes and exit BIOS Setup Utility

► Select *YES* to discard the changes.

The settings which were in force when *BIOS Setup Utility* was called remain effective. *BIOS Setup Utility* is terminated and the device is rebooted.

Load Setup Default – Apply default settings

► Select *YES* to apply the default settings to all menus of the *BIOS Setup Utility*.

The device restarts and the default settings become effective.

Discard Changes – Reset settings

► Select *YES* to load the settings for all menus that were valid when the *BIOS Setup Utility* was started.

Save Changes

► Select *YES* to save changes in between without exiting *BIOS Setup Utility*.

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Troubleshooting and tips

Take note of the safety notes in the "Safety" manual, when you connect or disconnect cables.

If a fault occurs, try to correct it as described. If you fail to correct the problem, proceed as follows:

- ► Make a note of the steps and the circumstances that led to the fault. Also make a note of any error messages displayed.
- ► Switch the notebook off.
- ► Please contact the Hotline/Help Desk.

  The telephone numbers are contained in the supplied help desk list. Please have the following information ready when you call:

  - – The model name and serial number of the notebook. The serial number is located on a sticker on the underside of the notebook.
  - – Notes of any messages that appear on the screen and information on acoustic signals.
  - – Any changes you have made to the hardware or software after receiving the notebook.
  - – Any changes you have made to the *BIOS Setup* settings after receiving the notebook.
  - – Your system configuration and all peripheral devices connected to your system.
  - – Your sales contract.

Restoring installed software

Please create backup copies of your files on a regular basis. If data is damaged or lost, you can restore your applications using the original data carriers. However, if you do not have backup copies of your own data files, they cannot be restored.

If your Operating System will not start, or if there are errors on the hard disk, the pre-installed software may have to be re-installed.

Restoring the operating system, drivers, manuals and special software

Information on restoring the operating system, drivers, manuals and special software can be found in the “Recovery Process” manual.

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The date/time of the notebook are incorrect

Cause	Troubleshooting
Time and date are incorrect.	► Set the time and/or date in the *Main* menu of the *BIOS Setup Utility*.

i If the date and time are repeatedly incorrect when you switch on the notebook, the buffer battery that supplies the internal clock is dead.

► Please contact your sales outlet or our hotline/help desk.

The LCD screen of the notebook remains blank

Cause	Troubleshooting
Monitor is switched off.	► Press a key or enter the password
External monitor or television set connected.	► Press the key combination Fn + F4 (switch screen output).

The LCD screen is difficult to read

Cause	Troubleshooting
Reflection	► Turn the notebook or alter the tilt of the LCD screen.

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The external monitor stays blank

Cause	Troubleshooting
Monitor is switched off.	► Switch the external monitor on.
Power saving has been activated (screen is blank).	► Press any key to continue.
Brightness is set too dark.	► Adjust the brightness of the monitor.
Screen output is set to the notebook's LCD screen	► Press the key combination Fn + F4 (switch screen output).
The external monitor's power cable or data cable is not connected properly.	► Switch off the external monitor and the notebook. ► Check whether the power cable is plugged properly into the external monitor and into the power socket. ► Check whether the data cable is properly connected to the notebook and the external monitor (if it is plugged in with a connector). ► Switch on the external monitor and the notebook.

The external monitor is blank or the image is unstable

Cause	Troubleshooting
The wrong external monitor has been selected or the wrong screen resolution has been set for the application programme.	► End the application programme under Windows with Alt + F4. If the fault persists after closing the programme, switch over to the notebook's internal LCD screen with Fn + F4. Change the following setting: ► Select the correct monitor or set the correct screen resolution. – Set the screen resolution: Select the correct screen resolution under *Start – Control Panel – Appearance and Themes – Settings – Screen Resolution*. – Select monitor: Select the correct monitor under *Start – Control Panel – Appearance and Themes – Display – Settings – Advanced – Monitor*.

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The notebook cannot be started

Cause	Troubleshooting
The battery is not installed correctly.	► Switch the notebook off. ► Check whether the battery is installed correctly in its compartment. ► Switch the notebook on.
The battery is dead.	► Charge the battery. Or ► Install a charged battery. Or ► Connect the mains adapter to the notebook.
The mains adapter is not connected correctly.	► Switch the notebook off. ► Check whether the mains adapter is connected correctly to the notebook. ► Switch the notebook on.

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The notebook stops working

Cause	Troubleshooting
The notebook is in Standby or Suspend mode.	► Reactivate the notebook by pressing a key (Standby mode) or by switching it back on (Suspend mode).
An application program has caused the fault.	► Close the application programme or restart the notebook by switching it on/off or with a warm boot.
The battery is dead.	► Charge the battery. Or ► Install a charged battery. Or ► Connect the mains adapter to the notebook.

The printer does not print

Cause	Troubleshooting
Printer not switched on	► Make sure that the printer is switched on and is on-line (see the manuals supplied with the printer).
Printer not correctly connected	► Check that the cable connecting the notebook and the printer is connected properly.
Printer driver faulty or incorrectly installed, or incorrect choice of printer driver	► Check that the cable connecting the notebook and the printer is connected properly. ► Check whether the correct printer driver is loaded (see printer documentation).

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The DVD film does not continue to play

Cause	Troubleshooting
Hardware acceleration activated	Should the picture freeze when playing some DVD films, deactivate hardware acceleration (it is activated in the default setting; this can be recognised from the checkmark in the corresponding checkbox). ► Open the drive tray. ► Place the DVD in the drive tray with the label facing upwards. ► Push in the drive tray until you feel it lock into place. ► Wait until Nero ShowTime starts. ► Press the right mouse button or touchpad key. A context menu appears. ► Click on *Configuration*. The *Settings* window will appear. ► Click on *Video*. ► In the *Hardware Acceleration* area uncheck the *Activate* box. The checkmark disappears. ► Click on *OK*. The function is now deactivated.

The radio connection to a network does not work

Cause	Troubleshooting
The wireless LAN module is switched off.	► Switch the radio component on (see "Switching wireless LAN module on and off").
The wireless LAN module is switched on. Nevertheless, the radio connection to a network does not function.	► Check whether the radio connection is switched on via the software. Details are contained in the online help for your wireless LAN software and in the "Wireless LAN" manual. You can find the "Wireless LAN" manual on your notebook, on the "Drivers & Utilities" CD/DVD or on our website.

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An acoustic signal is sounding once every second

Cause	Troubleshooting
The battery is almost flat.	► Charge the battery.

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Technical data

To find the correct technical data for your device, see the device information plate. The device information plate is located on the underside of the device.

Model designation (example: AMILO L7320)

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Notebook

Environmental conditions	
Environmental class	3K2
Temperature	
Operating (3K2)	5 °C .... 35 °C
Transport (2K2)	-15 °C .... 60 °C
Dimensions	
Width x Depth x Height (front/back)	357 mm, 271 mm, 39/26 mm
Weight (depending on configuration):	approx. 2,8 kg

The data sheet of this notebook contains further technical data. The data sheet is available to download from the Internet at *www.fujitsu-siemens.com*.

Battery

	Times
Charging time (when not in operation):	approx. 1.5 hours
Operating time	approx. 1.5 hours (depending on application)

Mains adapter 65 W

Electrical data	
Main	
Rated voltage	100 V to 240 V (automatic)
Rated frequency	50 Hz to 60 Hz (automatic)
Sub	
Rated voltage	20 V
Max. rated current	3.25 A

You can readily order an additional mains adapter and an additional power cable.

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Manufacturer’s notes

Disposal and recycling

You can find more information on this subject on your notebook, on the "Drivers & Utilities" CD/DVD or on our website.

Declarations of Conformity

You will find the Declaration of Conformity for the AMILO on the Internet at: *www.fujitsu-siemens.com*. Hereby, Fujitsu Siemens Computers, declares that the AMILO is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Copyright-protected technology

This product incorporates copyright protection technology that is protected by method claims of certain U. S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorised by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

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CE marking

CE marking for devices without radio component

The shipped version of this device complies with the requirements of the EEC directives 89/336/EEC "Electromagnetic compatibility" and 73/23/EEC "Low voltage directive".

CE marking for devices with radio component

This equipment complies with the requirements of Directive 1999/5/EC of the European Parliament and Commission from 9 March, 1999 governing Radio and Telecommunications Equipment and mutual recognition of conformity.
This equipment can be used in the following countries:

Belgium	Denmark	Germany	Estonia
Finland	France	Greece	UK
Ireland	Iceland	Italy	Latvia
Liechtenstein	Lithuania	Luxemburg	Malta
Netherlands	Norway	Austria	Poland
Portugal	Sweden	Switzerland	Slovakia
Slovenia	Spain	Czech Republic	Hungary
Cyprus			

Contact the corresponding government office of the respective country for current information on possible operating restrictions. If your country is not included in the list, then please contact the corresponding supervisory authority as to whether the use of this product is permitted in your country.

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